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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/646,942 | 08/21/2003 | Yasuo Isumi | GY0310US | 1297 |

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EXAMINER

GUTIERREZ, ANTHONY

| ART UNIT | PAPER NUMBER |
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2857

DATE MAILED: 10/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/646,942 | Applicant(s) ISUMI ET AL. | |
| | Examiner Anthony Gutierrez | Art Unit 2857 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-8, and 11-17 are rejected under 35 U.S.C. 101.

Claims 1-8 and 11 are rejected because the claimed invention is directed to non-statutory subject matter.

Applicant's specification provides for the invention to be implemented in the form of software (page 28). Claim 11 is specifically drawn to "a program". There is nothing in claims 1-8 to limit them to non-software applications. This is not the case for claims 9 and 10 which introduce the involvement of electromagnetic wave applying and detecting units and are not rejected under 35 USC 101. Therefore the Examiner understands the pass/fail judgment device of claims 9 and 10 to be limited to statutory subject matter (an apparatus), but considers the pass/fail judgment device of claims 1-8 to be respectively unlimited and therefore considers the device, consistent with applicant's specification, to be drawn to at least non-statutory subject matter (software programs per se). Claim 11 is likewise rejected for specifically being drawn to a program.

Claim 13-17 are rejected because the claimed invention lacks patentable utility.

The claims are drawn to an analyzer which includes a hard drive with program modules. The Examiner considers the analyzer to be drawn to a computer readable medium containing instructions for carrying out a process. There is however, no

recitation in the claims of a tangible result. The result involves determining the threshold of a discriminate function, but this is not a tangible result as it is not limited to be output from the media or made available to a user in any way that provides it with utility.

Claim 12 is a process claim.

A process is statutory if it requires physical acts to be performed outside the computer independent of and following the steps to be performed by a programmed computer, where those acts involve the manipulation of tangible physical objects and result in the object having a different physical attribute or structure (see MPEP 2106). A claim is limited to a practical application when the method, as claimed, produces a concrete, tangible and useful result; i.e., the method recites a step or act of producing something that is concrete, tangible and useful. Referring to the "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" in determining whether the claim is for a "practical application," the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final result achieved by the claimed invention is "useful, tangible and concrete." (<http://www.uspto.gov/web/offices/com/sol/og/2005/week47/patgupa.htm>)

The claimed method performs a pass/fail judgment but does not subsequently output or used the judgment in any manner. No information is presented to a user nor does a physical transformation occur outside the processing means as a result. The claims do not produce a tangible result and are therefore rejected.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims have been amended to include the limitation giving a specific probability distribution based on at least one of a rate of overcontrol in the pass category and a rate of flowout in the fail category. Applicant's specification (page 5) indicates that a rate of flowout is a rate at which defective articles are judged as passed and a rate of overcontrol is a rate at which acceptable articles are judged as failed. The limitation is then drawn to a probability distribution based on at least one of a rate of acceptable articles judged as failed in the pass category and a rate of defective articles judged as passed in the fail category.

The Examiner understands the concept of overcontrol and flowout individually. The Examiner understands the need to monitor for these two things as overcontrol is understood to be something in which acceptable articles which could pass are incorrectly judged as failed and flowout in which defective articles which should fail are incorrectly judged as passed.

It is unclear to the Examiner, however, how an article (regardless of whether it is acceptable or defective) could be judged as failed in the pass category and how an

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article (regardless of whether it is acceptable or defective) could be judged as passed in the fail category. This is what the amended language seems to suggest.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Keenan et al. (US 6,584,413 B1).

As to claims 1, and 9-13, Keenan et al. discloses a pass/fail judgment device comprising: a discriminant function computing unit, (in the form of a histogram) for computing discriminant functions which give variables used to separate the frequency distributions of pass category and fail category from a plurality of pieces of parameter information which make pass/fail judgment factors and pass/fail judgment result information thereof (col. 1, line 54-col. 2, line 38, where the pass and fail categories are related to the purity of a substance); a statistical parameter computing unit for computing the center of distribution and distribution parameters indicating the breadth of the distribution for said variables with respect to either or both of said pass category

and fail category (col. 9, lines 15 and 16, and col. 10, lines 1-16); a threshold determining unit for taking as a threshold for pass/fail judgment the value of a variable (col. 15, lines 33-45); a parameter information acquiring unit for acquiring a plurality of pieces of parameter information on pass/fail judgment objects (col. 5, lines 55-65); and a pass/fail judging unit for comparing the value of said variable obtained by substituting the parameter information into said discriminant function with said threshold and thereby makes pass/fail judgment (col. 26, line 62-col. 27, line 34). The method is implemented using spectral analysis in any available electromagnetic range (col. 3, lines 25-29).

As the Examiner best understands the claim as presently drafted, the threshold determining unit gives a specific distribution probability based on at least one of a rate of overcontrol in the pass category and a rate of flowout in the fail category based on said center of distribution and distribution parameters (col. 9, line 45 to col. 10, line 34) where the Poisson probability distribution is determined based on a standard deviation equal to the square root of a mean value in order to provide a weighting transformation that can detect contaminants, trace elements, or subtle gradients in the composition that otherwise would not have been detected, effectively allowing for less than pure amounts to be passed as pure amounts.

As to claim 2, Keenan et al. discloses that the statistical parameter computing unit computes the mean and standard deviation of fail category, and said threshold determining unit takes as said threshold said variable value equivalent to a value which is away from said mean of fail category by a constant multiple of the standard deviation thereof (col. 23, line 59- col. 24, line 9).

As to claims 4-6, Keenan et al. discloses converting specified inspection data obtained as the result of inspecting a plurality of pass/fail judgment objects with a specified inspecting instrument in advance into parameters which represent different pass/fail judgment factors by a plurality of different conversion expressions, and is stored in a specified storage medium (including a hard drive), and a plurality of pieces of parameter information on pass/fail judgment objects acquired by said parameter information acquiring unit and the results of pass/fail judgment by said pass/fail judging unit are additionally stored in the specified storage medium (col. 6, lines 11-40).

As to claims 7 and 8, Keenan et al. discloses that computing discriminant functions having as a variable any of a plurality of said parameters, the discriminant function computing unit computes correlation coefficients between the parameters, counts the number of parameters which give a correlation coefficient not less than a predetermined value in said pass category and fail category, discards parameters having a high count, and repeats this processing to eliminate multicollinearity (col. 12, lines 24-38 and col. 20, line 53- col. 21, line 3).

As to claims 3, and 14-17, Keenan et al. discloses that inputted rate of flowout is obtained using a threshold range corresponding to said rate of flowout, that non-defective units are judged as defective units and that the suitability of the threshold depends on whether the threshold falls in the range from the mean to nine times the standard deviation which is considered to be the range corresponding to said rate of overcontrol (col. 15, lines 32-49).

Response to Arguments

7. Applicant's arguments filed 7/10/06 have been fully considered but they are not persuasive.

The claims have been amended to include a specific limitation addressed above. The limitation makes the claim unclear to the Examiner, but in the Examiner's best understanding of the claimed subject matter, the Examiner has cited additional support in the prior art where the Examiner believes the limitation is suggested.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Gutierrez whose telephone number is (571) 272-2215. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on (571) 272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AG
Anthony Gutierrez

9/29/06

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